

CLAIMS

1.(ORIGINAL) An apparatus for furrow opening in soil including:

a first disc, configured to rotate around a first axis of rotation, having a blade with an outer perimeter that includes a plurality of symmetrical teeth;

a second analogous disc, configured to rotate around a second axis of rotation, operatively coupled to said first disc;

wherein said first and second discs are configured to incise and progressively widen a furrow in said soil thereby minimising soil disturbance.

2.(ORIGINAL) An apparatus for furrow opening in soil including:

a first disc configured to rotate around a first axis of rotation, said first disc includes a blade outwardly extending from said first axis of rotation, wherein said blade has an outer perimeter which includes a plurality of analogous outwardly extending teeth;

a second analogous disc operatively coupled to said first disc and configured to rotate around a second axis of rotation, said second disc mirrors said first disc along a central line of symmetry which is substantially parallel to the direction in which said apparatus travels when a furrow is being created;

said apparatus includes a leading edge and a trailing edge, wherein said teeth of said first and second discs are in closer proximity at said leading edge than at said trailing edge.

3.(CURRENTLY AMENDED) An apparatus for furrow opening in soil as in ~~any of the above claims~~ claim 2 wherein said axes of rotation of said first and second discs are substantially perpendicular to the direction of travel of

said apparatus.

4.(CURRENTLY AMENDED) An apparatus for furrow opening in soil as in ~~any~~
~~of the above claims~~ claim 2 wherein said first and second disc discs are
mounted so as to upwardly and rearwardly diverge from each other.

5.(CURRENTLY AMENDED) An apparatus for furrow opening in soil as in ~~any~~
~~of the above claims~~ claim 2 wherein said teeth on the perimeter of the
first disc abut the teeth on the perimeter of the second disc at a lower
vertical position approximating the soil entry point.

6.(CURRENTLY AMENDED) An apparatus for furrow opening in soil as in ~~any~~
~~of the above claims~~ claim 2 wherein a scraping assembly is associated
with the opening disc apparatus to dislodge any soil or straw that adheres
to the said first and second discs during operation.

7.(CURRENTLY AMENDED) An apparatus for furrow opening in soil as in ~~any~~
~~of the above claims~~ claim 2 wherein said first and second discs are
configured to rotate in unison wherein said teeth on said first disc aligns
with said teeth on said second disc.

8.(CURRENTLY AMENDED) An apparatus for furrow opening in soil as in ~~any~~
~~of the above claims~~ claim 2 wherein said first disc moves independently
from said second disc.

9.(ORIGINAL) An apparatus for furrow opening in soil including:
a fertiliser furrow opener adapted to create a fertiliser furrow, said
fertiliser furrow opener having a first and second disc that include a

plurality of teeth, wherein said discs are configured to incise and progressively widen a furrow in said soil thereby minimising soil disturbance, said apparatus includes a leading edge and a trailing edge, wherein said teeth of said first and second discs are in closer proximity at said leading edge than at said trailing edge;

at least one fertiliser outlet adapted to dispense fertiliser;

a seeding implement having a seeding wheel with an outer circumference that includes a plurality of teeth adapted to create a seeding furrow;

at least one seed outlet adapted to dispense seed; and

at least one depth determining apparatus adapted to govern the depth of said fertiliser furrow and said seeding furrow..

10.(ORIGINAL) An apparatus for furrow opening in soil as in claim 9 wherein said apparatus for furrow opening includes a gear mechanism configured to mechanically couple between said seeding implement and said fertiliser furrow opener.

11.(ORIGINAL) An apparatus for furrow opening in soil as in claim 9 wherein said teeth of said first and second discs are analogous.

12.(ORIGINAL) An apparatus for furrow opening in soil as in claim 9 wherein said teeth of said seeding wheel are analogous.

13.(ORIGINAL) An apparatus for furrow opening in soil as in claim 9 wherein said fertiliser outlet is adapted to dispense fertiliser into said furrow created by said fertiliser furrow opener.

14.(ORIGINAL) An apparatus for furrow opening in soil as in claim 9 wherein

said seeding wheel is adapted to partially fill the furrow created by said fertiliser furrow opener and then create said seeding furrow into which seed, dispensed from said seed outlet, is deposited.

15.(ORIGINAL) An apparatus for furrow opening in soil as in claim 9 wherein said apparatus includes at least one press wheel adapted to cover said seed with soil.

16.(ORIGINAL) A method for creating a seed furrow in soil using a furrow opener having a first and second disc that include a plurality of teeth, said method includes the steps of:
moving said furrow opener across the surface of said soil, whereby said furrow opener incises the surface of said soil; and
allowing said first and second discs to rotate about axes of rotation that are substantially perpendicular to the direction of travel of said furrow opener, said furrow opener includes a leading edge and a trailing edge, wherein said teeth of said first and second discs are in closer proximity at said leading edge than at said trailing edge, whereby said first and second discs are configured to progressively widen said furrow as said furrow opener is moved over the surface of said soil.

17.(ORIGINAL) A method for creating a seed furrow in soil as in claim 16 wherein more than one pair of said discs is attached to an agricultural implement.

18.(ORIGINAL) A method for creating a seed furrow in soil as in claim 16 wherein the depth to which said discs penetrate said soil can be adjusted.

19.(ORIGINAL) An apparatus for furrow opening in soil substantially as herein before described with reference to Figures 1-5.

20.(ORIGINAL) An apparatus for furrow opening in soil substantially as herein before described with reference to Figures 6-10.

21.(ORIGINAL) An apparatus for furrow opening in soil substantially as herein before described with reference to Figures 11-12b.